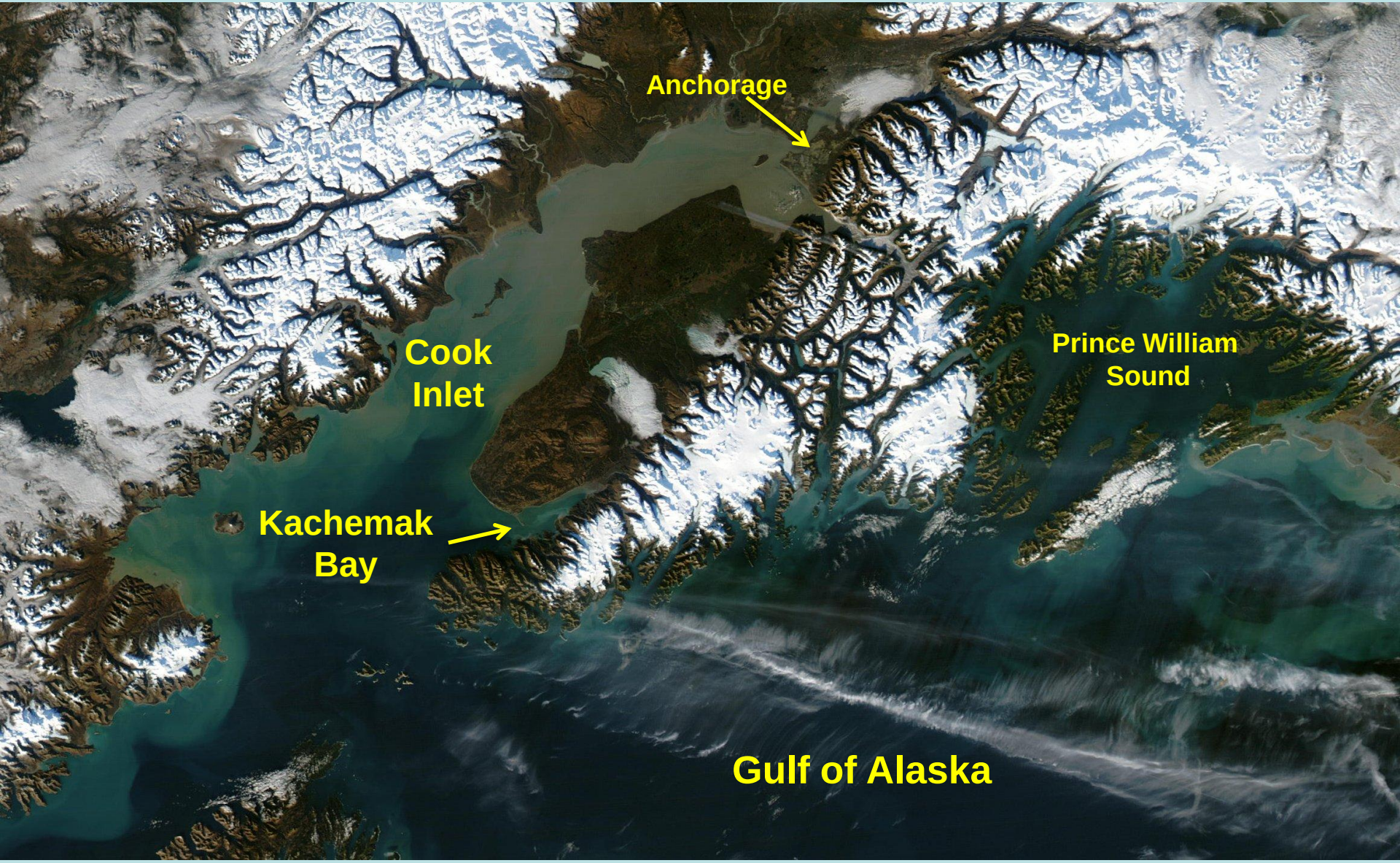
NOAA Kasitsna Bay Laboratory - Overview

Kasitsna Bay Laboratory
Center For Coastal Fisheries and Habitat Research
National Centers for Coastal Ocean Science
NOAA National Ocean Service

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

UAF
UNIVERSITY OF ALASKA
FAIRBANKS

Kasitsna Bay – located in Kachemak Bay Alaska



Kachemak Bay

A natural laboratory with diverse marine and terrestrial habitats

- Glacial and non-glacial watersheds

- 28 foot tidal range

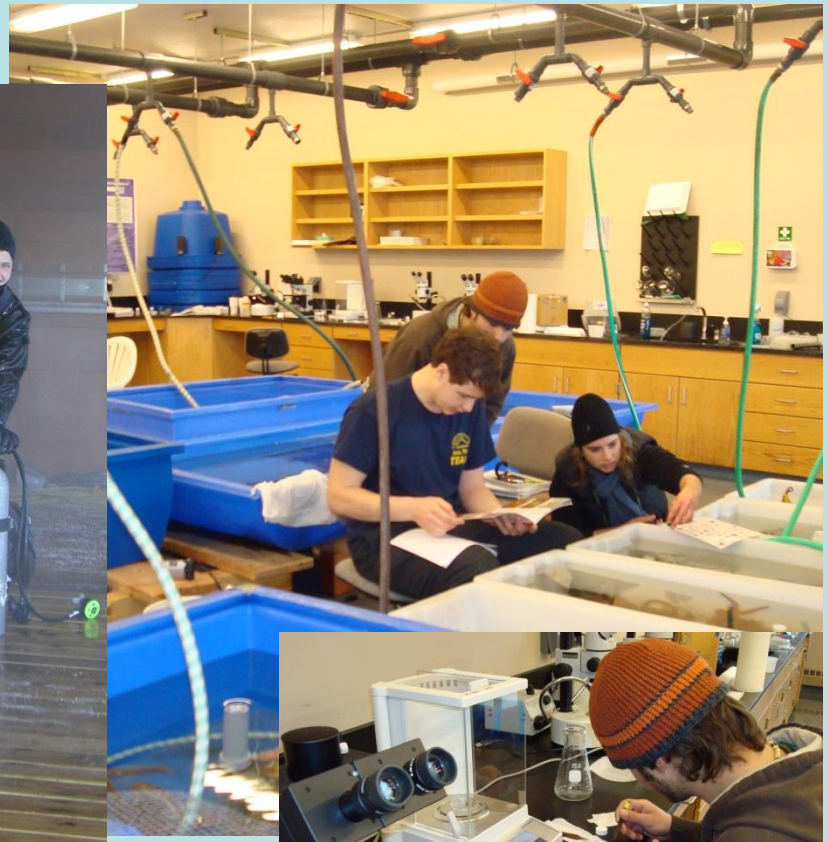
Access to KBL is by water taxi from Homer and driving from Seldovia

Air and ferry service available from Homer to Seldovia


NOAA Kasitsna Bay Laboratory
Kasitsna Bay Lab
McDonald Spit
Kasitsna Bay (on south side of Kachemak Bay)
Surrounded by mountains, glaciers, and volcanoes, with a 28 foot tidal range!

NOAA Kasitsna Bay Laboratory

KBL is operated in partnership between NOAA & University of Alaska Fairbanks



Research Support at KBL

- Flowing seawater wet laboratory
- Multiple dry laboratory spaces
- Dive support building
- Maintenance support buildings

Bunkhouse

- House up to 32 people in 8 rooms with bunk beds

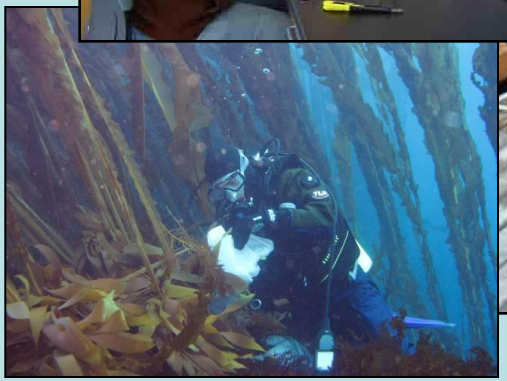
Dormitory

- Up to 16 people in 8 rooms with two single beds

Kitchens, laundry, lounges, wireless internet

Kasitsna Bay Laboratory Research Focus

- **Coastal impacts of climate change**
  - Effect on waters, habitats, and resources
- **Ocean acidification**
  - Variability in coastal/estuarine waters
  - Species impacts
- **Harmful algal blooms (HABs)**
  - Response to environmental change
- **Nearshore biodiversity**
  - Baseline / monitor change
- **Underwater technology**
  - Test bed for high-latitude coastal ecosystems and rugged conditions
  - Access to diverse habitats



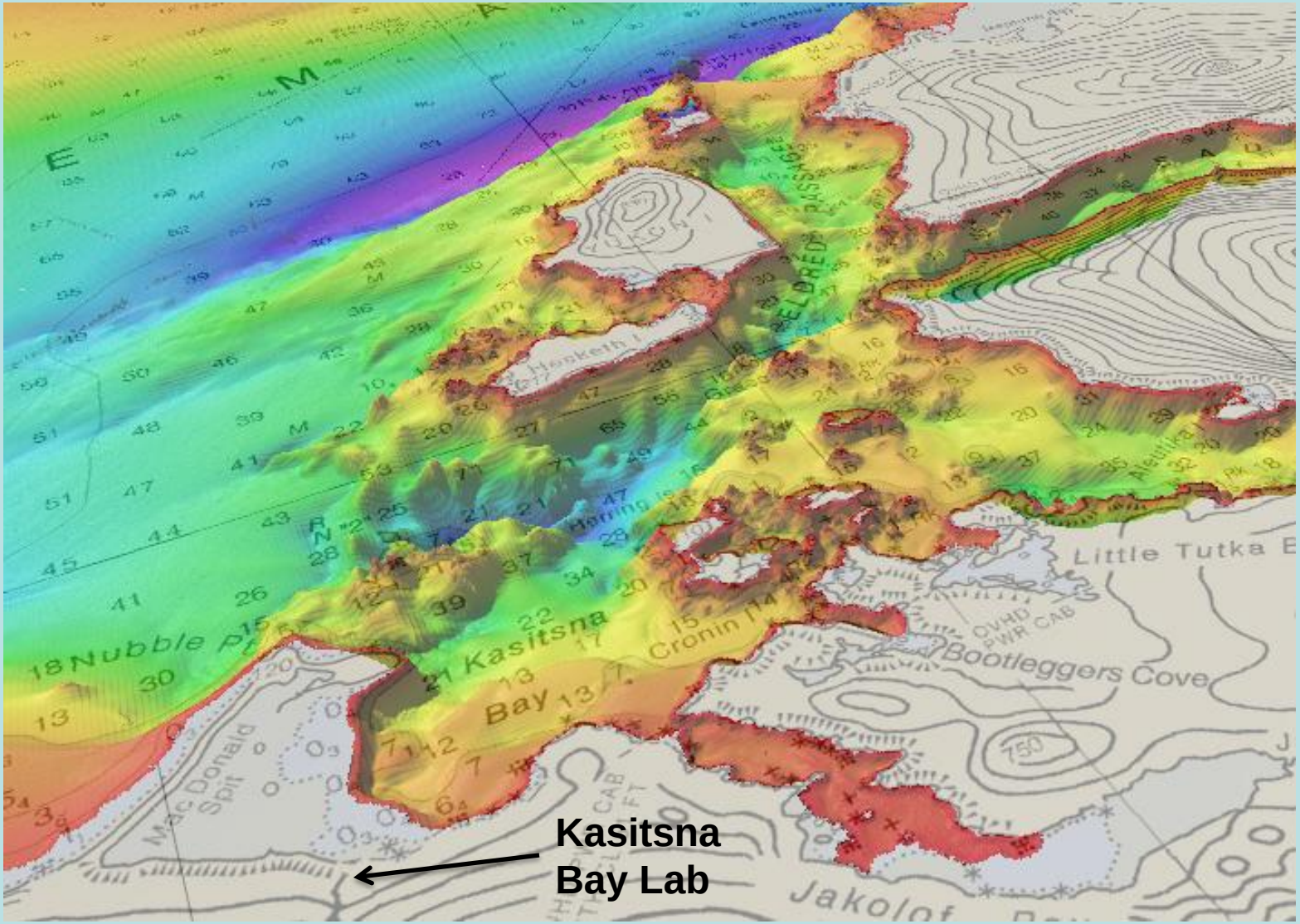
Education at Kasitsna Bay Lab

- **Classes**
  Undergraduate and graduate courses
  Scientific diver training
  Teacher/agency/tribal training
- **Internships – NOAA and NERR**
- **Graduate Student Research**
- **K-12 Science Field Camps**
- **Partners**
  UAF, UAA, public schools, Kachemak Bay NERR, Center for Alaskan Coastal Studies, Seldovia Village Tribe, Alaska Sea Grant, Bureau of Indian Affairs, other universities

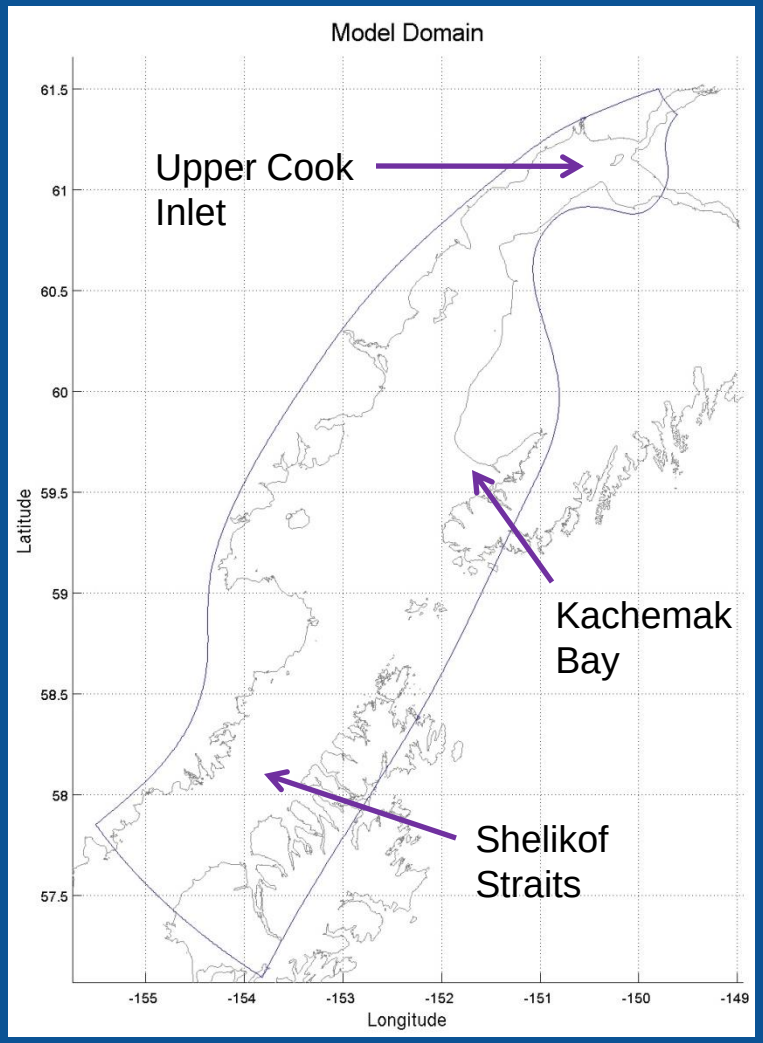
KACHEMAK BAY, ALASKA
HYDROPALOOZA
MAP ONCE, USE MANY WAYS

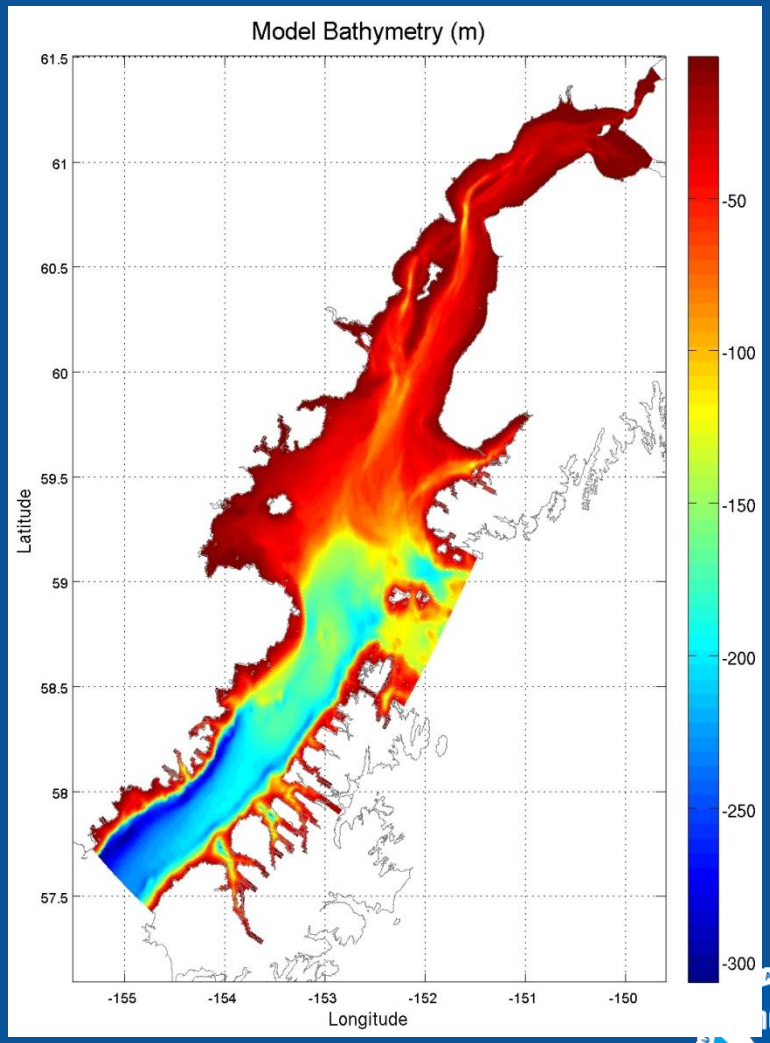
Collaborations with NOAA offices

NOAA high-resolution bathymetry data (NOS Coast Survey and NOAA ships)



NOS Cook Inlet Circulation Model (Coast Survey) & Current Measurements (CO-OPS)





NOAA Hollings Scholar Interns - 2012

- **Charlayna Cammarata** - Alaska Pacific University

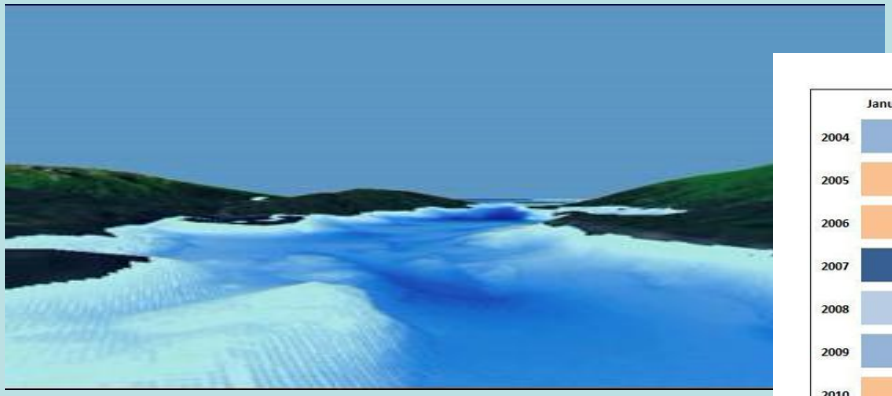
  Improve monitoring of plankton species that cause PSP

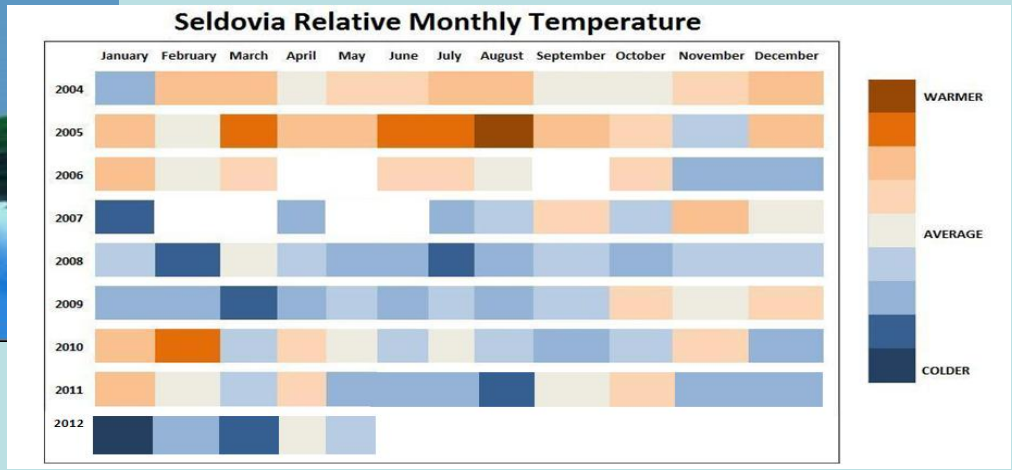
- **Rebecca Hollmann** – University of Denver

  Link environmental conditions and plankton growth

- **Alex Johnson** – College of William and Mary

  Develop seafloor animations and digital maps





Gulf Watch Alaska

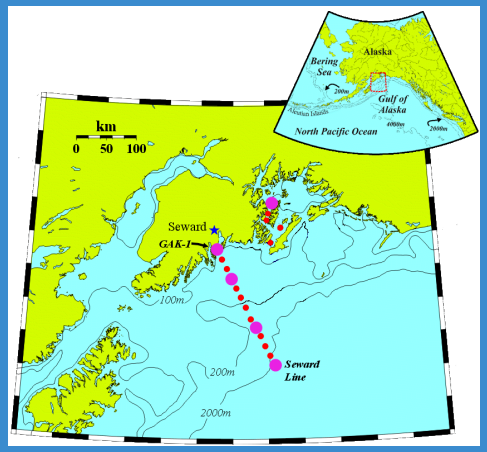
Long-term ecosystem monitoring program

NOAA

NOAA

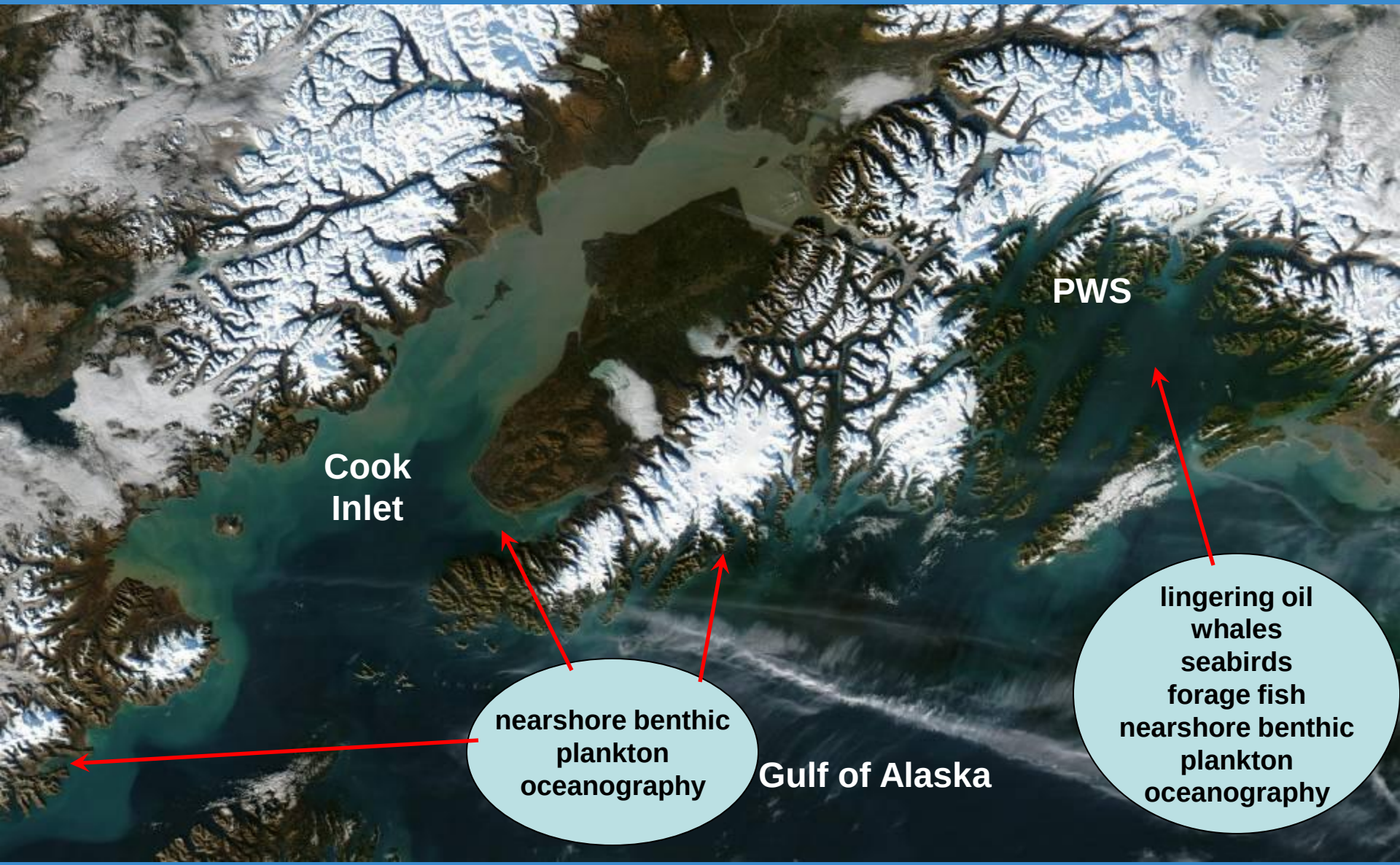
- **Thematic**
  - **Environmental Drivers** – oceanography, plankton
  - **Benthic** – intertidal invertebrates/algae, sea otters, seabirds
  - **Pelagic** – whales, seabirds, forage fish
  - **Lingering Oil** – sediments, sea otters/harlequin ducks

- **Geographic**
  - **Prince William Sound**
  - **Outer Kenai Coast**
  - **Lower Cook Inlet**



- **Programmatic**
  - **Integrated program management, administration, outreach**
  - **Data management and services**
  - **Synthesis -** LTM program/ EVOS impacts & recovery status

Gulf Watch Alaska Monitoring Sites



Program Management and Science Coordination/ Synthesis

- Molly McCammon – Alaska Ocean Observing System (Lead PI)
- Katrina Hoffman – Prince William Sound Science Center (Administrative Lead)
- Kris Holderied – NOAA Kasitsna Bay Laboratory (Science Lead & Environmental Drivers)
- Tuula Hollmen – Alaska Sea Life Center (Conceptual Ecological Modeling)
- Rob Bochenek– Axiom/AOOS (Data Management Lead)
- Matt Jones – National Center for Ecological Assessment & Synthesis (Synthesis)

Environmental Drivers Component

- Tom Weingartner – University of Alaska Fairbanks (Component Lead)
- Sonia Batten – Sir Alister Hardy Foundation for Ocean Science
- Rob Campbell – Prince William Sound Science Center
- Angela Doroff – ADF&G Kachemak Bay Research Reserve
- Russell Hopcroft – University of Alaska Fairbanks

Pelagic Component

- Jeep Rice – NOAA/NMFS Auke Bay Laboratory (Component Lead)
- Mary Ann Bishop – Prince William Sound Science Center
- David Irons – USFWS Alaska Region
- Craig Matkin – North Gulf Oceanic Society
- John Moran – NOAA/NMFS Auke Bay Laboratory
- John Piatt – USGS Alaska Science Center

Benthic Component

- Brenda Ballachey – USGS Alaska Science Center (Component Lead)
- James Bodkin – USGS Alaska Science Center
- Heather Coletti – National Park Service, SW Alaska Inventory & Monitoring Network
- Thomas Dean, Coastal Resources Associates, Inc
- Brenda Konar – University of Alaska Fairbanks
- Katrin Iken – University of Alaska Fairbanks

Lingering Oil Component

- Mark Carls – NOAA/NMFS Auke Bay Laboratory
- Brenda Ballachey - USGS Alaska Science Center

Principal Investigators

Thanks!

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